

Remediation Summary and Closure Request

Devon Energy Corporation
Tomcat Federal 21 Com #1
Lea County, New Mexico
Unit Letter "F", Section 21, Township 23 South, Range 32 East
Latitude 32.291682 North, Longitude 103.682428 West
NMOCD Incident # nKJ1528146835

Prepared For:

Devon Energy Corporation 6488 Seven Rivers Hwy Artesia, NM 88210

Prepared By:

Hungry Horse, LLC 4024 Plains Hwy Lovington, NM 88260

Office: (575) 393-3386

July 2022

Bradley Wells
Project Manager
bwells@hungry-horse.com

Daniel Dominguez
Environmental Manager
ddominguez@hungry-horse.com

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The following Remediation Summary and Closure Request serves as a condensed update on field activities undertaken at the afore referenced Site.

Background:

The site is located in Unit Letter F (SE/NW), Section 21, Township 23 South, Range 32 East, approximately 32 miles Southwest of Eunice, in Lea County, New Mexico. The property is on Federal land. Topographic Map, OSE POD Locations Map, and USGS Well Locations Map are included as Figure 1, Figure 2, and Figure 3, respectively.

The release occurred on an active tank battery; Latitude 32.291682 North, Longitude 103.682428 West. The Initial NMOCD Form C-141 indicates on April 12, 2015, approximately 135 bbls of produced water overflowed the tanks due to a SCADA pack failure. The release was contained within the unlined containment area. Approximately 130 bbls of produced water were recovered. Previously submitted NMOCD Form C-141 is available on the NMOCD Imaging System. NMOCD Form C-141 Closure page is included as Attachment V. The release event occurred, remediation activities were completed, and closure was accepted before the NMOCD Rule change on August 24, 2018.

NMOCD Site Classification:

A search of the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) groundwater databases was completed in an effort to determine the horizontal distance to known water sources within a half mile radius of the release site. Approximate depth to groundwater was determined using maintained and published water well data. Karst mapping indicates the site is not located in a Karst designated area. Depth to groundwater information is provided as Attachment III and the results are depicted on Figures 2 & 3.

One USGS water well was located within a half mile of the release area, listing depth to water at approximately five hundred fifteen feet bgs. The Lea County Depth to Ground Water map listed depth to water at approximately four hundred feet bgs. At that time the NMOCD allowed use of these maps to estimate depth to water. Depth to water was thus determined to be greater than one hundred feet bgs at this location. Utilizing this information, the NMOCD Recommended Remedial Action Levels (RRAL's) for the Site were determined as follows:

Depth to Groundwater	Constituent	Method	RRAL
	Chloride	EPA 300.0 or SM4500 CLB	1,000 mg/kg
100	TPH (GRO + DRO)	EPA SW-846 Method 8015M	5,000 mg/kg
>100′	BTEX	EPA SW-846 Methods 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Methods 8021B or 8260B	10 mg/kg



Delineation and Remediation Activities:

On September 29, 2015, Hungry Horse conducted an initial site assessment and delineation. Soil samples were collected using hand tools, no mechanical equipment was used. Twelve delineation soil samples were collected from three sample locations, SP1, SP2, and SP3, and were submitted to the laboratory for analysis of chloride.

Laboratory analytical results indicated contaminant concentrations were above the NMOCD delineation requirement of 250 mg/kg in each of the submitted samples, with the exception of SP3 at 2 feet bgs, which exhibited chloride concentration of 240 mg/kg.

On October 6, 2015, the Tomcat 21 Fed 1 Remediation Work Plan Packet was emailed to Kellie Jones at the NMOCD and Shelly Tucker at the BLM. The work plan proposed to hand excavate two feet of impacted material from the area of Sample Point #1 and one foot from the area of Sample Point #3. On October 8, 2015, the proposed work plan was approved by the OCD and BLM. Work plan and email correspondence are provided as Attachment I.

The release area was excavated, via hand tools, according to the approved work plan. Delineation was attempted at SP#1 in an effort to determine, the vertical extent of chloride contamination, and where chloride concentrations were less than or equal to 250 mg/kg. Due to the proximity of tanks and process equipment, delineation was conducted via hand auger. At eight feet below ground surface, auger refusal was encountered due to hard packed caliche. As deeper delineation was not possible, soil samples were collected and submitted to the laboratory for analysis of chloride.

Laboratory analytical results indicated contaminant concentrations were above the NMOCD delineation requirement of 250 mg/kg in each of the submitted samples and were presented to the OCD and BLM. On November 3, 2015, closure approval was given with the stipulation that the incident would remain open until the battery is removed from service. At that time a complete delineation and remediation would be required. Approximately 72 cy of excavated impacted material was transported to an NMOCD approved disposal facility, the excavation was backfilled with clean, non-impacted caliche and brought back to grade. Email correspondence are provided in Attachment I.

However, as the oil and gas industry faced a slowdown in 2016, Devon put a hold on all environmental jobs and related work before a closure report with Final C-141 could be submitted to the NMOCD. In June 2022, Devon requested Hungry Horse prepare for submission this Remediation Summary and Closure Request with NMOCD Form C-141 Closure page.

On May 8, 2020, a Remediation Summary Report Form was received by the NMOCD, however, to date, no response has been received. Report is provided in Attachment I.



A Sample Location Map is provided as Figure 4. A Summary of Soil Sample Laboratory Analytical Results is provided as Table 1 and Laboratory Analytical Reports are provided as Attachment IV. Site Photographs are provided as Attachment II.

Restoration, Reclamation, and Re-Vegetation:

Based upon laboratory analytical results from confirmation soil samples, and with OCD and BLM approval, the excavated area was backfilled and contoured to achieve erosion control and preserve surface water flow. As the affected area is located on an active tank battery, seeding will not be required.

Closure Request:

Remediation activities were conducted in accordance with NMOCD and BLM approved work plan. Soil affected above the NMOCD Recommended Remedial Action Levels has been excavated and hauled to an NMOCD approved disposal facility. Laboratory analytical results from soil samples were accepted by the NMOCD and BLM and closure report with Final C-141 was requested.

Based on laboratory analytical results and field activities conducted to date, Devon Energy Corporation respectfully requests closure be granted for the Tomcat Federal 21 Com #1 location.

Limitations:

Hungry Horse, LLC, has prepared this Remediation Summary and Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended. Hungry Horse has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Hungry Horse has not conducted an independent examination of the facts contained in referenced materials and statements. Hungry Horse has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Hungry Horse notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.



Distribution:

Devon Energy Corporation

6488 Seven Rivers Hwy Artesia, NM 88210

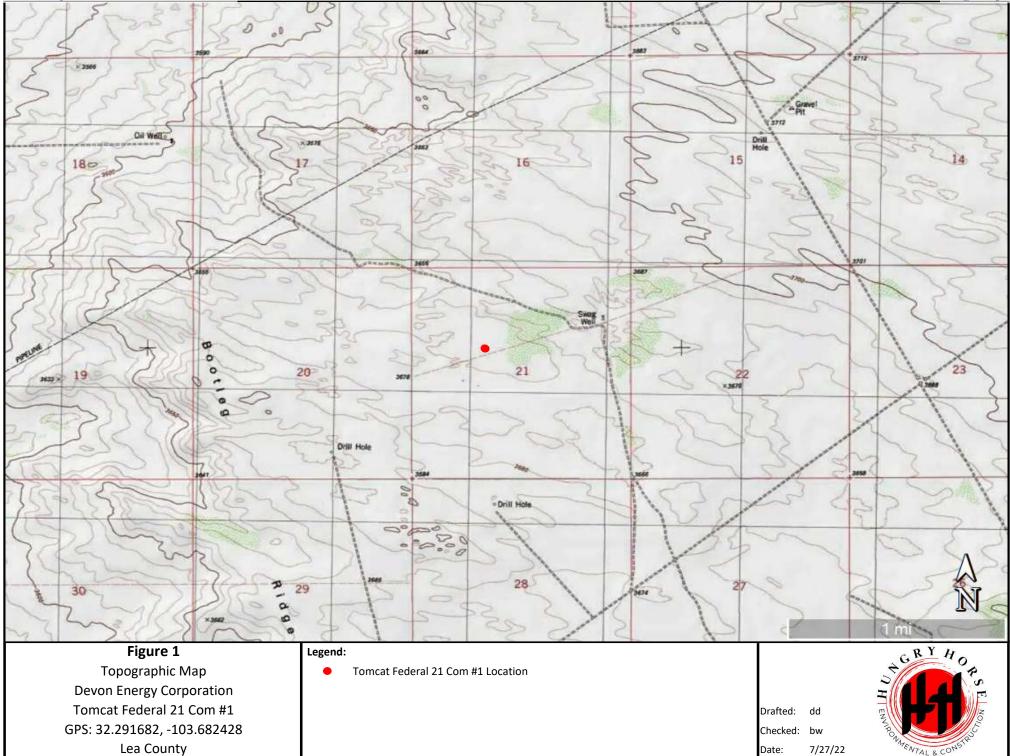
New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 2 506 W. Texas Artesia, NM 88210

New Mexico Bureau of Land Management

620 E Greene St Carlsbad, NM 88220

Figures



Received by OCD: 7/29/2022 3:07:03 PM Page 9 of 95



Figure 2

OSE POD Locations Map Devon Energy Corporation Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Legend:

- Tomcat Federal 21 Com #1 Location
- Active OSE Water Well

Drafted: dd
Checked: bw
Date: 7/27/22



Received by OCD: 7/29/2022 3:07:03 PM Page 10 of 95



Figure 3

USGS Well Locations Map Devon Energy Corporation Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Legend:

- Tomcat Federal 21 Com #1 Location
- USGS Well Location

Drafted: dd Checked: bw Date: 7/27/22



Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Drafted: dd Checked: bw 7/27/22 Date:

Table

TABLE 1 Summary of Soil Sample Laboratory Analytical Results Devon Energy Corporation Tomcat Federal 21 Com #1

NMOCD Ref. #: nKJ1528146835

Sample ID	Date	Depth (ft)	Soil Status	Field Chloride	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
	9/29/15	Surf	Excavated	-	-	-	-	-	-	4,880
	9/29/15	1	Excavated	ı	1	-	-	-	-	13,200
	9/29/15	2	Excavated	1	1	•	-	1	-	7,760
SP1	9/29/15	3	In-Situ	ı	1	-	-	-	-	6,900
	10/28/15	5	In-Situ	ı	1	-	-	-	-	576
	10/28/15	7	In-Situ	ı	1	-	-	-	-	6,130
	10/28/15	8	In-Situ	ı	-	-	-	-	-	7,600
	9/29/15	Surf	Excavated	-	-	-	-	-	-	128
SP2	9/29/15	1	Excavated	-	-	-	-	-	-	576
372	9/29/15	2	In-Situ	-	-	-	-	-	-	736
	9/29/15	3	In-Situ	1	1	-	-	-	-	736
	9/29/15	Surf	Excavated	-	-	-	-	-	-	3,040
SP3	9/29/15	1	Excavated	-	-	-	-	-	-	576
) oro	9/29/15	2	In-Situ	-	-	-	-	-	-	240
	9/29/15	3	In-Situ	1	1	-	-	-	-	5,760
NMOCD Recommend	ed Remedia	l Action	Levels		10	50	-	-	5,000	1,000

NOTES:

Released to Imaging: 7/29/2022 3:28:23 PM

Attachment I NMOCD Correspondence

By Kellie Jones at 11:17 am, Oct 08, 2015

3709 S. Eunice HWY P.O. Box 1058 Hobbs, NM 88241 Office: 575-393-3386 Fax: 575-391-4585 info@hungry-horse.com

By Kellie Jones at 11:16 am, Oct 08, 2015

DIRT WORK * ON-SITE REMEDIATION SOIL TESTING * EXCAVATION * ELECTRICAL

- 1. Please to vertical delineate SP1 to 250 ppm chlorides.
- 2. Ensure BLM approval/ concurrence.

60ct15

To: Kellie Jones, New Mexico Oil Conservation Division

Shelly Tucker, Bureau of Land Management

Reference: Remediation Work Plan

Operator: Devon Energy Production Company

Location: Tomcat 21 Fed 1 API: 30-025-33356

Legals: UL. F, Sec. 21, T23S, R32E

GPS: 32.2927 -103.6815

Site Information

This site is located in Lea County, New Mexico approximately 3.6 miles north of the intersection of New Mexico Highway 128 and Red Road and 3.5 miles east of Red Road. Based upon the New Mexico State Engineer's website, there is one water well in the area with a depth to groundwater of 400'. The Lea County Depth to Groundwater Map indicates the same depth to groundwater.

This battery is an active and working site. The produced water release that occurred on 12Apr15, had no impact outside the berms of the battery. All fluid released, remained inside the earthen berms.

Work Conducted to Date

A delineation was conducted by use of hand tools on 29Sept15. Due to safety concerns, no mechanical equipment was used. Soil samples were obtained at three sample points from the surface to 3' below ground surface (BGS). Lab analysis was conducted for Chlorides. (See attached map with sample points and lab results.)

Proposed Remediation

Based upon the delineation results, depth to ground water, and the safety concerns of working inside a battery, I propose to hand excavate 2' of impacted material from the area of Sample Point #1 and 1' from the area of Sample Point #3. This encompasses the area between and on both side of the tanks. A complete delineation and remediation will be conducted at the time the facility is shut in and taken out of service.

All impacted material will be transported to a division approved facility for disposal. The battery will then be backfilled with fresh material.

Sincerely,

Vernon K. Black, Hungry Horse, LLC

Remediation Summary Report Form

General Information

This report prepared by Hungry Horse, LLC on 5Nov15, is in response to the release for Devon Energy Production at the Tomcat 21 Fed #1 Battery, located in rural Lea County, New Mexico, for the release that occurred 12Apr15, due to equipment failure.

County: Lea

State: New Mexico

In Cultivated Land

Date: 5Nov15

Client: Devon Energy Production

Site Name: Tomcat 21 Fed #1

API: 30-025-33356

Site Coordinates Latitude: 32.2927

Longitude: -103.6815

Surface Owner: BLM

Release Description and Assessment

Date of Spill: 12Apr15

Other (Specify): X Produced Water Condensate Type of Spill: Oil

Cause of Spill: X Equipment Failure Valve Failure Line Rupture X Tank Overfill Leaking Tank

Other (Specify):

Other Contributing Factors or Comments: N/A

Total Released: 5 bbls Quantity Recovered: 130 bbls Quantity Spilled: 135 bbls

Method of Recovery: X Vacuum Truck Other (Specify):

C 141 Completed and Submitted: X Yes No New Mexico Oil Conservation Division Notified: X Yes No

In Pasture On Production Pad X Inside Firewall Spill Area Impacted:

Other (Specify): Nothing outside of firewall was impacted

Volume (Cu. Yards): 75 Total Square Foot Impacted: 3800 Estimated Depth: 1'

Other Comments: Nothing outside of firewall was impacted

Remediation Activity Summary

The remediation work plan was executed as approved by both NM OCD and BLM. Approximately one foot of impacted soil was removed from the impacted areas except for the area around Sample Point #1 where 2' of impacted soil was removed. As per the approved work plan, further delineation was conducted at SP #1 to try and determine the point at which Chlorides reached 250 ppm of less. Due to safety concerns, this further delineation was conducted by use of a hand auger. At eight foot below ground surface, auger refusal was encountered due to hard packed caliche. Soil samples were collected and lab analysis conducted. Results, which did not reach the 250 ppm goal, were resented to NM OCD and BLM. Due to safety concerns further delineation was not practical. Closure approval was given with the stipulation that the RP would remain open until such time the battery is removed from service and a full delineation and remediation is completed. All impacted material was transported to a division approved disposal facility and the excavated battery was backfilled with fresh caliche and brought back to grade.

Vernon K. Black, Hungry Horse, LLC

Vernon Black

From:

Vernon Black

Sent:

Tuesday, November 03, 2015 9:28 AM

To:

Kellie Jones (kellie.jones@state.nm.us)
Shelly J. Tucker (stucker@blm.gov); Brett Fulks (Brett.Fulks@dvn.com)

Cc: Subject:

Tomcat 21 Fed #1 Battery

Kellie,

Thanks for taking the time to meet with me this morning concerning the work at the above referenced location. I and my customer, Devon Energy Production, understand the NM OCD requirement for determining the depth at which Chlorides reach a level of 250 ppm or less. However, as we discussed it is a serious safety concern to try using equipment, other than hand tools, to determine the point at which the Chlorides reach this level inside the battery. We appreciate you taking this into consideration and will proceed, as you approved, to backfill the excavated site with the stipulation that the RP will remain open until such time the battery is removed from service. At that time a complete delineation/remediation will be performed.

Thanks for your help,

Vernon K. Black Hungry Horse, LLC PO Box 1058 Hobbs, NM 88241 575-393-3386 office 575-631-2253 cell

Vernon Black

From:

Tucker, Shelly <stucker@blm.gov>

Sent:

Tuesday, November 03, 2015 9:59 AM

To:

Vernon Black

Cc:

Kellie Jones (kellie.jones@state.nm.us); Brett Fulks (Brett.Fulks@dvn.com)

Subject:

Re: Tomcat 21 Fed #1 Battery

Thank you for the information. I will note this in my records.

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov



On Tue, Nov 3, 2015 at 9:28 AM, Vernon Black < vblack@hungry-horse.com > wrote:

Kellie,

Thanks for taking the time to meet with me this morning concerning the work at the above referenced location. I and my customer, Devon Energy Production, understand the NM OCD requirement for determining the depth at which Chlorides reach a level of 250 ppm or less. However, as we discussed it is a serious safety concern to try using equipment, other than hand tools, to determine the point at which the Chlorides reach this level inside the battery. We appreciate you taking this into consideration and will proceed, as you approved, to backfill the

excavated site with the stipulation that the RP will remain open until such time the battery is removed from service. At that time a complete delineation/remediation will be performed.

Thanks for your help,

Vernon K. Black

Hungry Horse, LLC

PO Box 1058

Hobbs, NM 88241

575-393-3386 office

575-631-2253 cell

Vernon Black

From:

Jones, Kellie, EMNRD < Kellie.Jones@state.nm.us>

Sent:

Thursday, October 08, 2015 1:21 PM

To:

Vernon Black; Shelly J. Tucker (stucker@blm.gov)

Cc:

Reggie Brooks; Terry Smith

Subject:

RE: Devon-Tomcat 21 Fed 1 Battery

Vernon,

Here is information on the recent submittal.

3902	10/8/2015	Α	Devon	Tomcat 21 Battery	23S 32E 21 F	30 025 33356	4,

The work plan is conditionally approved, with the condition of complete vertical delineation at the site down to 250 ppm chlorides.

If you have any questions, please feel free to contact me.

Kellie Jones

Environmental Specialist, District 1 Oil Conservation Division, EMNRD 575-393-6161 ext. 111 575-370-3180 (emergency-cell) E-Mail: kellie.jones@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Vernon Black [mailto:vblack@hungry-horse.com]

Sent: Wednesday, October 07, 2015 10:21 AM

To: Jones, Kellie, EMNRD; Shelly J. Tucker (stucker@blm.gov)

Cc: Reggie Brooks; Terry Smith

Subject: Devon-Tomcat 21 Fed 1 Battery

Kellie,

Thanks for taking the time to meet with me this morning to discuss the work plan for the above referenced site. As per our conversation, we'll proceed with the remediation plan as approved with the stipulation for further delineation at SP #1. We'll conduct further sampling/analysis at this point and provide you the results.

Shelly, for your review.

Thanks for all your help, Vernon K. Black Hungry Horse, LLC PO Box 1058 Hobbs, NM 88241 575-393-3386 office 575-631-2253 cell

Vernon Black

From:

Tucker, Shelly <stucker@blm.gov>

Sent:

Thursday, October 08, 2015 10:30 AM

To:

Vernon Black

Cc:

Kellie Jones (kellie.jones@state.nm.us); Reggie Brooks; Terry Smith

Subject:

Re: Devon-Tomcat 21 Fed 1 Battery

Vernon,

The BLM accepts/approves your proposed work plan - with concurrence of NMOCD stipulation of full delineation at SP1

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov



On Wed, Oct 7, 2015 at 10:21 AM, Vernon Black < <u>vblack@hungry-horse.com</u>> wrote:

Kellie,

Thanks for taking the time to meet with me this morning to discuss the work plan for the above referenced site. As per our conversation, we'll proceed with the remediation plan as approved with the stipulation for further delineation at SP #1. We'll conduct further sampling/analysis at this point and provide you the results.

Shelly, for your review.

Thanks for all your help,

Vernon K. Black

Hungry Horse, LLC

PO Box 1058

Hobbs, NM 88241

575-393-3386 office

575-631-2253 cell

Attachment II Site Photographs







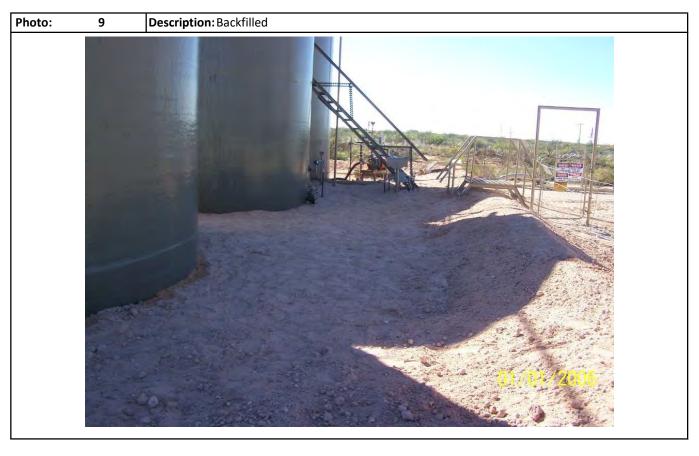






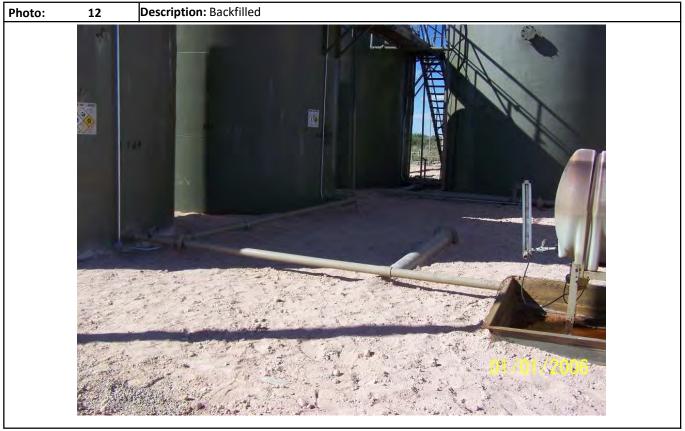












Attachment III Depth to Groundwater



New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 624060.85 **Northing (Y):** 3573529.32 **Radius:** 805

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/27/22 10:36 AM WELLS WITH WELL LOG INFORMATION

Received by OCD: 7/29/2022 3:07:03 PM



Outs Colosers: Geography Anno.
Water Guelly - United States - GO

Click to hideNews Bulletins

Explore the NEW LISGS.
 Full News

Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes. Additional precoutions are term.

USGS 321735103402501 23S 32E 21 241A

Available data for this site: Vertic-Daty: Palsice empte: VEX
Lea Courty, New Mexico
Hydrotogic Unit Code 19060011
Latituda 32º17:35°, Longuide 103º40'25° NAD27
Latituda 32º17:35°, Longuide 103º40'25° NAD27
This will is completed in the Chert aquifres (X09900THER) national aquifor:
This will is completed in the Sama Rosa Sandatono (23158/KS) local aquifor:

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					Cartie C																															
Section Sect																																				
Inventory of wa	ster-quelty data w	th retrieval																																		
Tob-separated	data, one result pe	r row																																		_
Teb-separated	deta one sample o	er may with remark	codes combined w	th values																																
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Sample Datetime	Time datum	Time datum reliability code	Sample Hedium Code	Hydro- logic Event	Hydro- logic Condition	Geo- logic unit	Sample type	depth.	Temper- ature, water, deg C (60010)	conduc- tance,	Hydro- gen ion, water, uniftrd calcd, mg/L (00191)	pH, water, unfitrd field, std units (00400)	water.	wat unf fixed	bonate, wat unf fixed	ats, wet unf	+ nitrite water,	Ortho- phos- phate, water, fftrd, mg/L (00660)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Hard- ness, water, mg/L as CaCO3 (00900)	hard- ness.	Calcium water, fltrd, mg/L (00915)	Nagnes- ium, water, fitrd, mg/L (00925)	Sodium, water, filtrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodium fraction of cations percent (00932)	Potas- sium, water, fltrd, mg/L (00935)	Chlor- ide, water, flird, mg/L (00940)	Sulfate water, fitrd, mg/L (00945)	Huor- ide, water, fitrd, mg/L (00950)	water, fitrd,	Iron, water, fitrd, ug/L (01046)	Manga- nese, water, fibrd, ug/L (01056)	solved	Dis- solved solids, water, tons/ acre-ft (70303)	Depth of hole, feet below LSD (72001)
1972-09-21																																J		J		

USLOOV

Attachment IV Laboratory Analytical Reports



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 01, 2015

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: TOMCAT 21 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/29/15 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

 Received:
 09/29/2015
 Sampling Date:
 09/29/2015

 Reported:
 10/01/2015
 Sampling Type:
 Soil

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #1 SURFACE (H502574-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 1' BGS	6 (H502574-02)							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13200	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 2' BGS	6 (H502574-03)							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7760	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 3' BGS	6 (H502574-04)							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6900	16.0	09/30/2015	ND	416	104	400	0.00	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

 Received:
 09/29/2015
 Sampling Date:
 09/29/2015

 Reported:
 10/01/2015
 Sampling Type:
 Soil

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #2 SURFACE (H502574-05)

Chloride, SM4500Cl-B	mg	mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #2 1' BGS (H502574-06)

mg/kg

Chloride, SM4500CI-B

<u> </u>				•					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/30/2015	ND	416	104	400	0.00	

Analyzed By: HM

Sample ID: SP #2 2' BGS (H502574-07)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #2 3' BGS (H502574-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 SURFACE (H502574-09)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	09/30/2015	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

 Received:
 09/29/2015
 Sampling Date:
 09/29/2015

 Reported:
 10/01/2015
 Sampling Type:
 Soil

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #3 1' BGS (H502574-10)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 2' BGS (H502574-11)

Chloride, SM4500CI-B	mg/	kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 3' BGS (H502574-12)

Chlorida EM4E00CL P

Cilioride, SM4500CI-B	ilig	/ Kg	Allalyze	и ву: пм					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	09/30/2015	ND	416	104	400	0.00	

Analyzed By UM

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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476	ANALYSIS REQUEST
Company Name: HUNGRY HOSSE, LLC	BILL 10
Project Manager: Vernon K. Black	7.0.
8501	Company:
16bb5	Attn:
#	Address:
	City:
Project Name: Toncat 21 Bastey	State: Zip:
on: State of Contract of Contr	Phone #:
Decapa K. Ok	Fax#:
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PLEASE NOTE: Liability and Jamages. Cardina's security and processors of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after compelion of the applicable analyses. All claims including those for negligence and any other clause whatsoever shall be deemed waived unless made in writing and received by, of loss of jobs incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, of loss of jobs incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, of loss of jobs incurred by client, its subsidiaries.	
Relinquished/By: Time; Time;	Phone Result:
Relinquished By: Timp: 1 M Received By: Timp: 1 M M	Garcia
Sample of Cool (ondition CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	No.

Page 6 of 7

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(0/0) 000-2020 1 MA (0/0) 000-27/0	ANALYSIS	VSIS REQUEST
Company Name: HUNGRY HOSE, LLC	0/17/0	- 1
Project Manager: Vernon K. Black	7.0.#:	
Address: PO BOX 1058	Company:	
City: Hobbs State: NM Zip: 8824	Attn:	
Phone #: 575-631-2253 Fax #: 575-391-4585	85 Address:	
Project	City:	
Project Name: Tomcot @ 21	State: Zip:	
ă	Phone #:	
Derno	Fax#:	
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Page 7 of 7



October 30, 2015

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: TOMCAT 21 FED #1

Enclosed are the results of analyses for samples received by the laboratory on 10/28/15 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Celey D. Keene

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

Received: 10/28/2015 Sampling Date: 10/28/2015

Reported: 10/30/2015 Sampling Type: Soil

Project Name: TOMCAT 21 FED #1 Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY, NM

Sample ID: SP1 5' BGS (H502831-01)

Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	10/30/2015	ND	464	116	400	10.9	
Sample ID: SP1 7' BGS (H5	02831-02)								

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6130	16.0	10/30/2015	ND	464	116	400	10.9	

Sample ID: SP1 8' BGS (H502831-03)

Chloride, SM4500CI-B mg/kg		/kg	Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7600	16.0	10/30/2015	ND	464	116	400	10.9		

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

(5/5) 393-2326 FAX (5/5) 393-24/6		
Company Name: HUNGRY HOTSE, LLC	BILL TO	ANALYSIS REQUEST
-	P.O. #:	
Address: PO BOX 1058	Company:	
city: Hobbs State: NM zip: 8824	Attn:	
e #:	Address:	
×	City:	
Project Name: TOMCAT 21 Rd H	State: Zip:	
Project Location: Lealanty	Phone #:	
Sampler Name: Vernon K. Black		
	MATRIX PRESERV. SAMPLING	
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G)RAB OR CONTAIN GROUNDW	SOIL DIL SLUDGE OTHER: ACID/BASE CCE/COOL OTHER: DATE	
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Relinquished By: Timp:	Phone Result: Fax Result: REMARKS:	☐ Yes ☐ No Add'I Phone #: ☐ Yes ☐ No Add'I Fax #:
Relinquished By: Date: Received By: Time:	Jan Jan Jan	
Delivered By: (Circle One) Sampler - UPS - Bus - Other FBH Diff	Sample Condition CHECKED BY: Cool Intact (Initials)	

Page 4 of 4

Attachment V NMOCD Form C-141 Closure page

Page 47 of 95

Incident ID	nKJ1528146835
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following it	tems must be included in the closure report.
	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
☐ Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and renhuman health or the environment. In addition, OCD acceptance of a compliance with any other federal, state, or local laws and/or regula restore, reclaim, and re-vegetate the impacted surface area to the conaccordance with 19.15.29.13 NMAC including notification to the OC	nediate contamination that pose a threat to groundwater, surface water, a C-141 report does not relieve the operator of responsibility for tions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in
Signature: Dale Woodall	
Signature: Dalk Woodalk	Date:
email: <u>dale.woodall@dvn.com</u>	Telephone: 405-318-4697
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Jocelyn Harimon	07/29/2022
Closure Approved by:	Date:
Printed Name:	Title:



Remediation Summary and Closure Request

Devon Energy Corporation
Tomcat Federal 21 Com #1
Lea County, New Mexico
Unit Letter "F", Section 21, Township 23 South, Range 32 East
Latitude 32.291682 North, Longitude 103.682428 West
NMOCD Incident # nKJ1528146835

Prepared For:

Devon Energy Corporation 6488 Seven Rivers Hwy Artesia, NM 88210

Prepared By:

Hungry Horse, LLC 4024 Plains Hwy Lovington, NM 88260

Office: (575) 393-3386

July 2022

Bradley Wells
Project Manager
bwells@hungry-horse.com

Daniel Dominguez
Environmental Manager
ddominguez@hungry-horse.com

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NMOCD Site Classification	_
Delineation and Remediation Activities	2
Restoration, Reclamation, and Re-Vegetation	3
Closure Request	3
Limitations	3
Distribution	4

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Figure 1 – Topographic Map

Figure 2 – OSE POD Locations Map

Figure 3 – USGS Well Locations Map

Figure 4 – Sample Location Map

Tables

Table 1 – Summary of Soil Sample Laboratory Analytical Results

Attachments

Attachment I – NMOCD Correspondence

Attachment II – Site Photographs

Attachment III - Depth to Groundwater

Attachment IV – Laboratory Analytical Reports

Attachment V - NMOCD Form C-141 Closure Page

The following Remediation Summary and Closure Request serves as a condensed update on field activities undertaken at the afore referenced Site.

Background:

The site is located in Unit Letter F (SE/NW), Section 21, Township 23 South, Range 32 East, approximately 32 miles Southwest of Eunice, in Lea County, New Mexico. The property is on Federal land. Topographic Map, OSE POD Locations Map, and USGS Well Locations Map are included as Figure 1, Figure 2, and Figure 3, respectively.

The release occurred on an active tank battery; Latitude 32.291682 North, Longitude 103.682428 West. The Initial NMOCD Form C-141 indicates on April 12, 2015, approximately 135 bbls of produced water overflowed the tanks due to a SCADA pack failure. The release was contained within the unlined containment area. Approximately 130 bbls of produced water were recovered. Previously submitted NMOCD Form C-141 is available on the NMOCD Imaging System. NMOCD Form C-141 Closure page is included as Attachment V. The release event occurred, remediation activities were completed, and closure was accepted before the NMOCD Rule change on August 24, 2018.

NMOCD Site Classification:

A search of the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) groundwater databases was completed in an effort to determine the horizontal distance to known water sources within a half mile radius of the release site. Approximate depth to groundwater was determined using maintained and published water well data. Karst mapping indicates the site is not located in a Karst designated area. Depth to groundwater information is provided as Attachment III and the results are depicted on Figures 2 & 3.

One USGS water well was located within a half mile of the release area, listing depth to water at approximately five hundred fifteen feet bgs. The Lea County Depth to Ground Water map listed depth to water at approximately four hundred feet bgs. At that time the NMOCD allowed use of these maps to estimate depth to water. Depth to water was thus determined to be greater than one hundred feet bgs at this location. Utilizing this information, the NMOCD Recommended Remedial Action Levels (RRAL's) for the Site were determined as follows:

Depth to Groundwater	Constituent	Method	RRAL
	Chloride	EPA 300.0 or SM4500 CLB	1,000 mg/kg
>100′	TPH (GRO + DRO)	EPA SW-846 Method 8015M	5,000 mg/kg
	BTEX	EPA SW-846 Methods 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Methods 8021B or 8260B	10 mg/kg



Delineation and Remediation Activities:

On September 29, 2015, Hungry Horse conducted an initial site assessment and delineation. Soil samples were collected using hand tools, no mechanical equipment was used. Twelve delineation soil samples were collected from three sample locations, SP1, SP2, and SP3, and were submitted to the laboratory for analysis of chloride.

Laboratory analytical results indicated contaminant concentrations were above the NMOCD delineation requirement of 250 mg/kg in each of the submitted samples, with the exception of SP3 at 2 feet bgs, which exhibited chloride concentration of 240 mg/kg.

On October 6, 2015, the Tomcat 21 Fed 1 Remediation Work Plan Packet was emailed to Kellie Jones at the NMOCD and Shelly Tucker at the BLM. The work plan proposed to hand excavate two feet of impacted material from the area of Sample Point #1 and one foot from the area of Sample Point #3. On October 8, 2015, the proposed work plan was approved by the OCD and BLM. Work plan and email correspondence are provided as Attachment I.

The release area was excavated, via hand tools, according to the approved work plan. Delineation was attempted at SP#1 in an effort to determine, the vertical extent of chloride contamination, and where chloride concentrations were less than or equal to 250 mg/kg. Due to the proximity of tanks and process equipment, delineation was conducted via hand auger. At eight feet below ground surface, auger refusal was encountered due to hard packed caliche. As deeper delineation was not possible, soil samples were collected and submitted to the laboratory for analysis of chloride.

Laboratory analytical results indicated contaminant concentrations were above the NMOCD delineation requirement of 250 mg/kg in each of the submitted samples and were presented to the OCD and BLM. On November 3, 2015, closure approval was given with the stipulation that the incident would remain open until the battery is removed from service. At that time a complete delineation and remediation would be required. Approximately 72 cy of excavated impacted material was transported to an NMOCD approved disposal facility, the excavation was backfilled with clean, non-impacted caliche and brought back to grade. Email correspondence are provided in Attachment I.

However, as the oil and gas industry faced a slowdown in 2016, Devon put a hold on all environmental jobs and related work before a closure report with Final C-141 could be submitted to the NMOCD. In June 2022, Devon requested Hungry Horse prepare for submission this Remediation Summary and Closure Request with NMOCD Form C-141 Closure page.

On May 8, 2020, a Remediation Summary Report Form was received by the NMOCD, however, to date, no response has been received. Report is provided in Attachment I.



A Sample Location Map is provided as Figure 4. A Summary of Soil Sample Laboratory Analytical Results is provided as Table 1 and Laboratory Analytical Reports are provided as Attachment IV. Site Photographs are provided as Attachment II.

Restoration, Reclamation, and Re-Vegetation:

Based upon laboratory analytical results from confirmation soil samples, and with OCD and BLM approval, the excavated area was backfilled and contoured to achieve erosion control and preserve surface water flow. As the affected area is located on an active tank battery, seeding will not be required.

Closure Request:

Remediation activities were conducted in accordance with NMOCD and BLM approved work plan. Soil affected above the NMOCD Recommended Remedial Action Levels has been excavated and hauled to an NMOCD approved disposal facility. Laboratory analytical results from soil samples were accepted by the NMOCD and BLM and closure report with Final C-141 was requested.

Based on laboratory analytical results and field activities conducted to date, Devon Energy Corporation respectfully requests closure be granted for the Tomcat Federal 21 Com #1 location.

Limitations:

Hungry Horse, LLC, has prepared this Remediation Summary and Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended. Hungry Horse has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Hungry Horse has not conducted an independent examination of the facts contained in referenced materials and statements. Hungry Horse has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Hungry Horse notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.



Distribution:

Devon Energy Corporation

6488 Seven Rivers Hwy Artesia, NM 88210

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division, District 2 506 W. Texas Artesia, NM 88210

New Mexico Bureau of Land Management

620 E Greene St Carlsbad, NM 88220

Figures

Topographic Map
Devon Energy Corporation
Tomcat Federal 21 Com #1
GPS: 32.291682, -103.682428

Lea County

Drafted: dd Checked: bw Date: 7/27/22 Received by OCD: 7/29/2022 3:07:03 PM Page 56 of 95



Figure 2

OSE POD Locations Map Devon Energy Corporation Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Legend:

- Tomcat Federal 21 Com #1 Location
- Active OSE Water Well

Drafted: dd
Checked: bw
Date: 7/27/22



Received by OCD: 7/29/2022 3:07:03 PM Page 57 of 95



Figure 3

USGS Well Locations Map Devon Energy Corporation Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Legend:

- Tomcat Federal 21 Com #1 Location
- USGS Well Location

Drafted: dd
Checked: bw
Date: 7/27/22



Tomcat Federal 21 Com #1 GPS: 32.291682, -103.682428 Lea County

Drafted: dd Checked: bw 7/27/22 Date:

Table

TABLE 1 Summary of Soil Sample Laboratory Analytical Results Devon Energy Corporation Tomcat Federal 21 Com #1

NMOCD Ref. #: nKJ1528146835

Sample ID	Date	Depth (ft)	Soil Status	Field Chloride	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
	9/29/15	Surf	Excavated	-	-	-	-	-	-	4,880
	9/29/15	1	Excavated	1	1	•	-	1	1	13,200
	9/29/15	2	Excavated	-	-	-	-	-	-	7,760
SP1	9/29/15	3	In-Situ	-	-	-	-	-	-	6,900
	10/28/15	5	In-Situ	1	1	-	-	1	-	576
	10/28/15	7	In-Situ	1	1	1	-	ı	-	6,130
	10/28/15	8	In-Situ	1	-	-	-	ı	-	7,600
	9/29/15	Surf	Excavated	-	-	-	-	-	-	128
CD2	9/29/15	1	Excavated	-	-	-	-	-	-	576
SP2	9/29/15	2	In-Situ	-	-	-	-	-	-	736
	9/29/15	3	In-Situ	1	-	-	-	-	-	736
	9/29/15	Surf	Excavated	-	-	-	-	-	-	3,040
cn2	9/29/15	1	Excavated	-	-	-	-	-	-	576
SP3	9/29/15	2	In-Situ	-	-	-	-	-	-	240
	9/29/15	3	In-Situ	-	-	-	-	-	-	5,760
NMOCD Recommended Remedial Action Levels					10	50	-	•	5,000	1,000

NOTES:

Attachment I NMOCD Correspondence

By Kellie Jones at 11:17 am, Oct 08, 2015

3709 S. Eunice HWY P.O. Box 1058 Hobbs, NM 88241 Office: 575-393-3386 Fax: 575-391-4585

info@hungry-horse.com

By Kellie Jones at 11:16 am, Oct 08, 2015

DIRT WORK * ON-SITE REMEDIATION SOIL TESTING * EXCAVATION * ELECTRICAL 1. Please to vertical delineate SP1 to 250 ppm chlorides.

2. Ensure BLM approval/ concurrence.

60ct15

To: Kellie Jones, New Mexico Oil Conservation Division Shelly Tucker, Bureau of Land Management

Reference: Remediation Work Plan

Operator: Devon Energy Production Company

Location: Tomcat 21 Fed 1 API: 30-025-33356

Legals: UL. F, Sec. 21, T23S, R32E

GPS: 32.2927 -103.6815

Site Information

This site is located in Lea County, New Mexico approximately 3.6 miles north of the intersection of New Mexico Highway 128 and Red Road and 3.5 miles east of Red Road. Based upon the New Mexico State Engineer's website, there is one water well in the area with a depth to groundwater of 400'. The Lea County Depth to Groundwater Map indicates the same depth to groundwater.

This battery is an active and working site. The produced water release that occurred on 12Apr15, had no impact outside the berms of the battery. All fluid released, remained inside the earthen berms.

Work Conducted to Date

A delineation was conducted by use of hand tools on 29Sept15. Due to safety concerns, no mechanical equipment was used. Soil samples were obtained at three sample points from the surface to 3' below ground surface (BGS). Lab analysis was conducted for Chlorides. (See attached map with sample points and lab results.)

Proposed Remediation

Based upon the delineation results, depth to ground water, and the safety concerns of working inside a battery, I propose to hand excavate 2' of impacted material from the area of Sample Point #1 and 1' from the area of Sample Point #3. This encompasses the area between and on both side of the tanks. A complete delineation and remediation will be conducted at the time the facility is shut in and taken out of service.

All impacted material will be transported to a division approved facility for disposal. The battery will then be backfilled with fresh material.

Sincerely,

Vernon K. Black, Hungry Horse, LLC

Remediation Summary Report Form

General Information

This report prepared by Hungry Horse, LLC on 5Nov15, is in response to the release for Devon Energy Production at the Tomcat 21 Fed #1 Battery, located in rural Lea County, New Mexico, for the release that occurred 12Apr15, due to equipment failure.

Date: 5Nov15

Client: Devon Energy Production

State: New Mexico County: Lea Site Name: Tomcat 21 Fed #1

API: 30-025-33356

Site Coordinates Latitude: 32.2927

Longitude: -103.6815

Surface Owner: BLM

Release Description and Assessment

Date of Spill: 12Apr15

Other (Specify): X Produced Water Condensate Type of Spill: Oil

Cause of Spill: X Equipment Failure Valve Failure Line Rupture X Tank Overfill Leaking Tank

Other (Specify):

Other Contributing Factors or Comments: N/A

Total Released: 5 bbls Quantity Recovered: 130 bbls Quantity Spilled: 135 bbls

Method of Recovery: X Vacuum Truck Other (Specify):

C 141 Completed and Submitted: X Yes No New Mexico Oil Conservation Division Notified: X Yes No

In Pasture In Cultivated Land On Production Pad X Inside Firewall Spill Area Impacted:

Other (Specify): Nothing outside of firewall was impacted

Volume (Cu. Yards): 75 Total Square Foot Impacted: 3800 Estimated Depth: 1'

Other Comments: Nothing outside of firewall was impacted

Remediation Activity Summary

The remediation work plan was executed as approved by both NM OCD and BLM. Approximately one foot of impacted soil was removed from the impacted areas except for the area around Sample Point #1 where 2' of impacted soil was removed. As per the approved work plan, further delineation was conducted at SP #1 to try and determine the point at which Chlorides reached 250 ppm of less. Due to safety concerns, this further delineation was conducted by use of a hand auger. At eight foot below ground surface, auger refusal was encountered due to hard packed caliche. Soil samples were collected and lab analysis conducted. Results, which did not reach the 250 ppm goal, were resented to NM OCD and BLM. Due to safety concerns further delineation was not practical. Closure approval was given with the stipulation that the RP would remain open until such time the battery is removed from service and a full delineation and remediation is completed. All impacted material was transported to a division approved disposal facility and the excavated battery was backfilled with fresh caliche and brought back to grade.

Vernon K. Black, Hungry Horse, LLC

Vernon Black

From:

Vernon Black

Sent:

Tuesday, November 03, 2015 9:28 AM

To:

Kellie Jones (kellie.jones@state.nm.us)

Cc:

Shelly J. Tucker (stucker@blm.gov); Brett Fulks (Brett.Fulks@dvn.com)

Subject:

Tomcat 21 Fed #1 Battery

Kellie,

Thanks for taking the time to meet with me this morning concerning the work at the above referenced location. I and my customer, Devon Energy Production, understand the NM OCD requirement for determining the depth at which Chlorides reach a level of 250 ppm or less. However, as we discussed it is a serious safety concern to try using equipment, other than hand tools, to determine the point at which the Chlorides reach this level inside the battery. We appreciate you taking this into consideration and will proceed, as you approved, to backfill the excavated site with the stipulation that the RP will remain open until such time the battery is removed from service. At that time a complete delineation/remediation will be performed.

Thanks for your help,

Vernon K. Black Hungry Horse, LLC PO Box 1058 Hobbs, NM 88241 575-393-3386 office 575-631-2253 cell

Vernon Black

From:

Tucker, Shelly <stucker@blm.gov>

Sent:

Tuesday, November 03, 2015 9:59 AM

To:

Vernon Black

Cc:

Kellie Jones (kellie.jones@state.nm.us); Brett Fulks (Brett.Fulks@dvn.com)

Subject:

Re: Tomcat 21 Fed #1 Battery

Thank you for the information. I will note this in my records.

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov



On Tue, Nov 3, 2015 at 9:28 AM, Vernon Black < vblack@hungry-horse.com > wrote:

Kellie,

Thanks for taking the time to meet with me this morning concerning the work at the above referenced location. I and my customer, Devon Energy Production, understand the NM OCD requirement for determining the depth at which Chlorides reach a level of 250 ppm or less. However, as we discussed it is a serious safety concern to try using equipment, other than hand tools, to determine the point at which the Chlorides reach this level inside the battery. We appreciate you taking this into consideration and will proceed, as you approved, to backfill the

excavated site with the stipulation that the RP will remain open until such time the battery is removed from service. At that time a complete delineation/remediation will be performed.

Thanks for your help,

Vernon K. Black

Hungry Horse, LLC

PO Box 1058

Hobbs, NM 88241

575-393-3386 office

575-631-2253 cell

Vernon Black

From:

Jones, Kellie, EMNRD < Kellie.Jones@state.nm.us>

Sent:

Thursday, October 08, 2015 1:21 PM

To:

Vernon Black; Shelly J. Tucker (stucker@blm.gov)

Cc:

Reggie Brooks; Terry Smith

Subject:

RE: Devon-Tomcat 21 Fed 1 Battery

Vernon,

Here is information on the recent submittal.

3902	10/8/2015	Α	Devon	Tomcat 21 Battery	23S 32E 21 F	30 025 33356	4,

The work plan is conditionally approved, with the condition of complete vertical delineation at the site down to 250 ppm chlorides.

If you have any questions, please feel free to contact me.

Kellie Jones

Environmental Specialist, District 1 Oil Conservation Division, EMNRD 575-393-6161 ext. 111 575-370-3180 (emergency-cell) E-Mail: kellie.jones@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Vernon Black [mailto:vblack@hungry-horse.com]

Sent: Wednesday, October 07, 2015 10:21 AM

To: Jones, Kellie, EMNRD; Shelly J. Tucker (stucker@blm.gov)

Cc: Reggie Brooks; Terry Smith

Subject: Devon-Tomcat 21 Fed 1 Battery

Kellie,

Thanks for taking the time to meet with me this morning to discuss the work plan for the above referenced site. As per our conversation, we'll proceed with the remediation plan as approved with the stipulation for further delineation at SP #1. We'll conduct further sampling/analysis at this point and provide you the results.

Shelly, for your review.

Thanks for all your help, Vernon K. Black Hungry Horse, LLC PO Box 1058 Hobbs, NM 88241 575-393-3386 office 575-631-2253 cell

Vernon Black

From:

Tucker, Shelly <stucker@blm.gov>

Sent:

Thursday, October 08, 2015 10:30 AM

To:

Vernon Black

Cc:

Kellie Jones (kellie.jones@state.nm.us); Reggie Brooks; Terry Smith

Subject:

Re: Devon-Tomcat 21 Fed 1 Battery

Vernon,

The BLM accepts/approves your proposed work plan - with concurrence of NMOCD stipulation of full delineation at SP1

The BLM approval/acceptance does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist Bureau of Land Management

620 E. Greene St Carlsbad, NM 88220

575.234.5905 - Direct 575.361.0084 - Cellular

stucker@blm.gov



On Wed, Oct 7, 2015 at 10:21 AM, Vernon Black < <u>vblack@hungry-horse.com</u>> wrote:

Kellie,

Thanks for taking the time to meet with me this morning to discuss the work plan for the above referenced site. As per our conversation, we'll proceed with the remediation plan as approved with the stipulation for further delineation at SP #1. We'll conduct further sampling/analysis at this point and provide you the results.

Shelly, for your review.

Thanks for all your help,

Vernon K. Black

Hungry Horse, LLC

PO Box 1058

Hobbs, NM 88241

575-393-3386 office

575-631-2253 cell

Attachment II Site Photographs

























Attachment III Depth to Groundwater



New Mexico Office of the State Engineer

Wells with Well Log Information

No wells found.

UTMNAD83 Radius Search (in meters):

Easting (X): 624060.85 **Northing (Y):** 3573529.32 **Radius:** 805

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

7/27/22 10:36 AM WELLS WITH WELL LOG INFORMATION

Received by OCD: 7/29/2022 3:07:03 PM



Outs Colosers: Geography Anno.
Water Quality - United States - GO

Click to hideNews Bulletins

Explore the NEW USGS
 Full News

Water Quality Samples for the Nation

To view additional data-quality attributes, output the results using these options: one result per row, expanded attributes. Additional precoutions are term.

USGS 321735103402501 235 32E 21 241A

Available data for this site: Vertic-Daty: Palsice sensite: VEX.
Lea Courty, New Mexico
Mysterogic Unit Code 19060011
Latituda 32º17:35°, Longuide 103º40'25° NAD27
Latituda 32º17:35°, Longuide 103º40'25° NAD27
This will is completed in the Chert aquifres (XM09000THER) national aquifor:
This will is completed in the Sama Rosa Sandatone (23158/RS) local aquifor:

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Sample Datetime	Time datum	Time datum reliability code	Sample Hodium Code	Hydro- logic Event	Hydro- legic Condition	Geo- logic unit	Sample type	Sam- pling depth, feet (00003)	Temper- ature, water, deg C (00010)	Specif- lc conduc- tance, wat unf uS/em @ 28 degC (00095)	Hydro- gen ion, water, unfitrd calcd, mg/L (00191)	pH, water, unfford field, std units (00400)	Carbon dioxide water, unfiltrd mg/L (00405)	ANC, wat unf fixed end pt, field, mg/L as CaCO3 (00410)	Sicar- bonate, wat unif fixed end pt, field, mg/L (00440)	Carbon- ate, wet unf fixed and pt, field, mg/L (00445)	Nitrate + nitrite water, fitrd, mg/L as N (00631)	Ortho- phos- phate, water, filtrd, mg/L (00660)	Ortho- phos- phate, water, flord, mg/L as P (00671)	Hard- ness, water, mg/L as CaC03 (00900)	Noncarb hard- ness, wat unf field, mg/L as Ca003 (00902)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Sodium, water, fitrd, mg/L (00930)	Sodium adsorp- tion ratio (00931)	Sodken frac- tion of cations sercent (00932)	Potas- sium, water, fitrd, mg/L (00935)	Chlor- ide, water, flird, mg/L (00940)	Sulfate water, filtrd, mg/L (00945)	Huor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Iron, water, filtrd, ug/L (01046)	Manga- nese, water, filtrd, ug/L (01056)	Dis- nolved solids, sum of consti- tuents, mg/L (70301)	Dis- solved solids, water, tons/ acre-ft (70303)	Depth of hole, feet below LSD (72001)
1972-09-21	N	DT	7	wg		A 2315N	RS	9 515	20.5	701	0,00001	6.1	4.0	255	311	0.0	2.40	0.030	0.010	210	0.0	29.0	34.0	75.0	2.2	43	2.00	15.0	89.0	1.00	17.0	М.	0.0	427	0.58	515

USLOOV

Attachment IV Laboratory Analytical Reports



October 01, 2015

VERNON BLACK

Hungry Horse Environmental

P.O. Box 1058

Hobbs, NM 88240

RE: TOMCAT 21 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 09/29/15 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



09/29/2015

Soil

Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

Received: 09/29/2015 Sampling Date:
Reported: 10/01/2015 Sampling Type:

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #1 SURFACE (H502574-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 1' BGS	6 (H502574-02)							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13200	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 2' BGS	6 (H502574-03)							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7760	16.0	09/30/2015	ND	416	104	400	0.00	
Sample ID: SP #1 3' BGS	6 (H502574-04)							
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Cardinal Laboratories *=Accredited Analyte

ND

416

104

400

0.00

09/30/2015

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Chloride

Celey D. Keene, Lab Director/Quality Manager

6900

16.0



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

 Received:
 09/29/2015
 Sampling Date:
 09/29/2015

 Reported:
 10/01/2015
 Sampling Type:
 Soil

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #2 SURFACE (H502574-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #2 1' BGS (H502574-06)

mg/kg

Chloride, SM4500CI-B

				•					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/30/2015	ND	416	104	400	0.00	

Analyzed By: HM

Sample ID: SP #2 2' BGS (H502574-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #2 3' BGS (H502574-08)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 SURFACE (H502574-09)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	09/30/2015	ND	416	104	400	0.00	

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

 Received:
 09/29/2015
 Sampling Date:
 09/29/2015

 Reported:
 10/01/2015
 Sampling Type:
 Soil

Project Name: TOMCAT 21 BATTERY Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY

Sample ID: SP #3 1' BGS (H502574-10)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 2' BGS (H502574-11)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/30/2015	ND	416	104	400	0.00	

Sample ID: SP #3 3' BGS (H502574-12)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	09/30/2015	ND	416	104	400	0.00	

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Celey D. Keine



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

PLEASE NOTE: Liability and Damages. Cardinal within 3 and client's exclusive remerby for any claim arising whether based in contract or bot, shall be finited to the applicable analyses. All claims including those for negligence and any other cause whatsoover shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without familiation, business interruptions, loss of use, or loss of profits incurred by client, its substitution business interruptions, loss of use, or loss of profits incurred by client, its substitution of the above stated reasons or otherwise. Relinquished By: Received By: Received By: Received By: Received By: Received By: Received By: RemarkS:	5 Suface 6 1 But 140 X	Cab I.D. Sample I	Phone #: Pernon K. Black MATRIX PRESERV. SAMPLING	ne #: '	box 16	BILL TO ANALYSIS
d'I Phone #:						LYSIS REQUEST

† Cardinal cannot accept verbal changes. Please fax written changes to 505/393-2476



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

(575) 393-2326 FAX (5/5) 393-24/6		STATE OF THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE
Company Name: HUNGEY HOSE, LLC	BILL TO ANALYSIS REQUEST	
Uernon K	P.O. #:	
88	Company:	
1	Attn:	
Project #: Project Owner: Dev W	City:	
ame: Tuncatod 2	State: Zip:	
ă	Phone #:	
Verno		
	PRESERV SAMPLING	
Lab I.D. Sample I.D. B OR (C)OMF ITAINERS INDWATER EWATER	R: BASE: COOL	
# CON GROU WASTI 7 SOIL OIL	SLUDGOTHE ACIDATE TIME	
73 865		
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive renedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the	rect or tort, shall be limited to the amount paid by the client for the	
Relinquished By: Time:///	is based upon any of the above stated reasons or otherwise. Phone Result:	
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Delivered By: (Circle One) Sample Jond Sampler - UPS - Bus - Other:	ondition CHECKED BY: tack (Initials)	
Co.CC VNO	Zo C	



October 30, 2015

VERNON BLACK
Hungry Horse Environmental
P.O. Box 1058

Hobbs, NM 88240

RE: TOMCAT 21 FED #1

Enclosed are the results of analyses for samples received by the laboratory on 10/28/15 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keene

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



Analytical Results For:

Hungry Horse Environmental VERNON BLACK P.O. Box 1058 Hobbs NM, 88240

Fax To: (505) 391-4585

Received: 10/28/2015 Sampling Date: 10/28/2015 Reported: 10/30/2015 Sampling Type: Soil

Project Name: TOMCAT 21 FED #1 Sampling Condition: ** (See Notes)
Project Number: NONE GIVEN Sample Received By: Judy Garcia

Project Location: LEA COUNTY, NM

Sample ID: SP1 5' BGS (H502831-01)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	10/30/2015	ND	464	116	400	10.9	
Sample ID: SP1 7' BGS (F	1502831-02)								
Chloride, SM4500Cl-B	ma	/ka	Analyze	ed Bv: AP					

	9	, ,	,						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6130	16.0	10/30/2015	ND	464	116	400	10.9	

Sample ID: SP1 8' BGS (H502831-03)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7600	16.0	10/30/2015	ND	464	116	400	10.9	

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Celey D. Keene



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

(5/5) 393-2326 FAX (5/5) 393-24/6		
Company Name: HUNGRY HOTSE, LLC	BILL TO	ANALYSIS REQUEST
-	P.O. #:	
Address: PO BOX 1058	Company:	
city: Hobbs State: NM zip: 8824	Attn:	
e #:	Address:	
×	City:	
Project Name: TOMCAT 21 Rd H	State: Zip:	
Project Location: Lealanty	Phone #:	
Sampler Name: Vernon K. Black		
	MATRIX PRESERV. SAMPLING	
(C)OMP		
G)RAB OR CONTAIN GROUNDW	SOIL DIL SLUDGE OTHER: ACID/BASE CCE/COOL OTHER: DATE	
5,86		
3. 8. 365 6	X	
		F
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after competition of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries.	ased in contract or tort, shall be limited to the amount paid by the client for the de in writing and received by Cardinal within 30 days after completion of the appli- s interruptions, loss of use, or loss of profits incurred by client, its subsidiaries.	acable
Relinquished By: Timp:	Phone Result: Fax Result: REMARKS:	☐ Yes ☐ No Add'I Phone #: ☐ Yes ☐ No Add'I Fax #:
Relinquished By: Date: Received By: Time:	Jan Jan Jan	
Delivered By: (Circle One) Sampler - UPS - Bus - Other FBH Diff	Sample Condition CHECKED BY: Cool Intact (Initials)	

Page 4 of 4

Attachment V NMOCD Form C-141 Closure page

Page 94 of 95

Incident ID	nKJ1528146835
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following i	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
□ Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
□ Laboratory analyses of final sampling (Note: appropriate ODG)	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and remuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the confidence with 19.15.29.13 NMAC including notification to the O	nations. The responsible party acknowledges they must substantially notitions that existed prior to the release or their final land use in CD when reclamation and re-vegetation are complete. Title: Env. Prof.
email: dale.woodall@dvn.com	Telephone: 405-318-4697
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by:	Date:
Printed Name:	Title:

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 129856

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	129856
	Action Type:
	[C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimor	None	7/29/2022